

REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application.

Claims 1-24 are now present in this application. Claims 1 and 13 are independent. Claims 1-24 have been amended. Reconsideration of this application, as amended, is respectfully requested.

Information Disclosure Citation

Applicants thank the Examiner for considering the reference supplied with the Information Disclosure Statement filed March 29, 2001, and for providing Applicants with an initialed copy of the PTO-1449 form filed therewith.

Drawings

Applicants have not received a Notice of Draftsperson's Patent Drawing Review PTO-948 or other indication of whether or not the formal drawings have been approved by the Draftsperson. Since no objection has been received, Applicants assume that the drawings are acceptable and that no further action is necessary. Confirmation thereof in the next Office Action is respectfully requested.

Rejections under 35 U.S.C. §102

Claims 1-24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,995,212 to Dar et al. (Dar). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicants respectfully submit that independent claim 1 has been amended to recite a combination of steps in a method for detecting defects in an optical fiber, including determining a blob threshold based on intensities in the portion of the image, to isolate a blob in the portion of the image and identifying the blob in the image referring to the determined blob threshold. Independent claim 13 has been similarly amended to recite a combination of elements in a storage medium encoded with machine-readable computer program codes for detecting defects in an optical fiber, the storage medium including instructions for causing a computer to implement a method, including the steps of determining a blob threshold based on intensities in the portion of the image, to isolate a blob in the portion of the image and identifying the blob in the image referring to the determined blob threshold.

Applicants respectfully submit that these combinations of elements as set forth in independent claims 1 and 13 are not disclosed or made obvious by the

prior art of record, including Dar.

The Examiner states that Dar teaches determining a blob threshold. The Applicants respectfully submit that (1) a blob is not determined using the threshold mentioned in the portion of Dar cited by the Examiner, and (2) the threshold mentioned in the portion of Dar referenced by the Examiner is not determined based on intensities in a portion separated for image processing.

The teachings of Dar include two blob analyses, which are illustrated in flow charts shown Fig. 9A and Fig. 9B, respectively. The blob analysis shown in the flow chart of Fig. 9A is a blob analysis for the core zone, and the blob analysis shown in the flow chart of Fig. 9B is a blob analysis for the clad zone.

In the blob analysis of Fig. 9A, step 402 extracts the core zone, and preferably includes core discrimination in which the average illumination in the core itself is subtracted from the pixels in the core itself. However, the next step of Dar (step 404) is not a blob detection step. Rather, it is a step that detects potential blobs. The blob detection step is performed adaptively by searching for regions within the core zone which vary, either above or below, in intensity from the local average intensity by a predetermined amount. The predetermined amount may be set based on a desired sensitivity, and is preferably some multiple, e.g., 0.5-1.5, of the local standard deviation. However, a blob is still not detected by step 404. This fact remains even if, *arguendo*, a threshold were

determined in step 404 based on intensities. However step 404 only identifies regions that may contain a blob.

In the next step of Dar (step 406), a threshold is applied. However, the applied threshold is not determined based on intensities. Rather, in the portion under analysis, step 406 applies a size threshold to the regions that were searched out in step 404 in order to eliminate scratches and noise. After the completion of the size threshold of step 406, step 408 of Dar determines if there are any blobs in the core zone. However, the previously performed size threshold step 406 does not use a threshold that was determined based on intensities in the core, e.g., in the portion of the image separated for processing.

Similarly, Fig. 9B, referenced by the Examiner, shows a flow chart illustrating a blob analysis for the clad zone. This blob analysis is similar to the blob analysis for the core. In other words, Dar teaches a step 416 in which a potential blob detection method is performed, that is, in step 416, the method of Dar adaptively detects potential blobs by searching for regions within the clad zone which vary from the local average intensity by a predetermined amount (see Dar, Col.11, lines 38-42). A next step (step 418) then size thresholds the regions searched out in step 416 to eliminate scratches and noise, e.g., the blob must be more than a few pixels wide, or whatever the expected width of the widest scratch (see Dar, Col. 11, lines 47-53). In other words, the threshold used in this step is a threshold that has been determined

is based on an expected size of scratches and the amount of noise present. What remains after scratches and noise are eliminated may be identified as a blob. However, the size threshold applied to make this identification is not based on intensities in the clad zone, e.g., in the portion of the image separated for processing.

Therefore, Applicants respectfully submit that the combination of elements as set forth in independent claims 1 and 13 (as amended) is not disclosed or made obvious by the prior art of record, including Dar, for the reasons explained above. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

With regard to dependent claims 2-12 and 14-24, Applicants submit that claims 2-12 and 14-24 depend, either directly or indirectly, from independent claims 1 and 13, which are allowable for the reasons set forth above, and therefore claims 2-12 and 14-24 are allowable based on their dependence from claims 1 and 13. Reconsideration and allowance thereof are respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be

withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Percy L. Square, Registration No. 51,084, at (703) 205-8034, in the Washington, D.C. area.


Prompt and favorable consideration of this Amendment is respectfully requested.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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